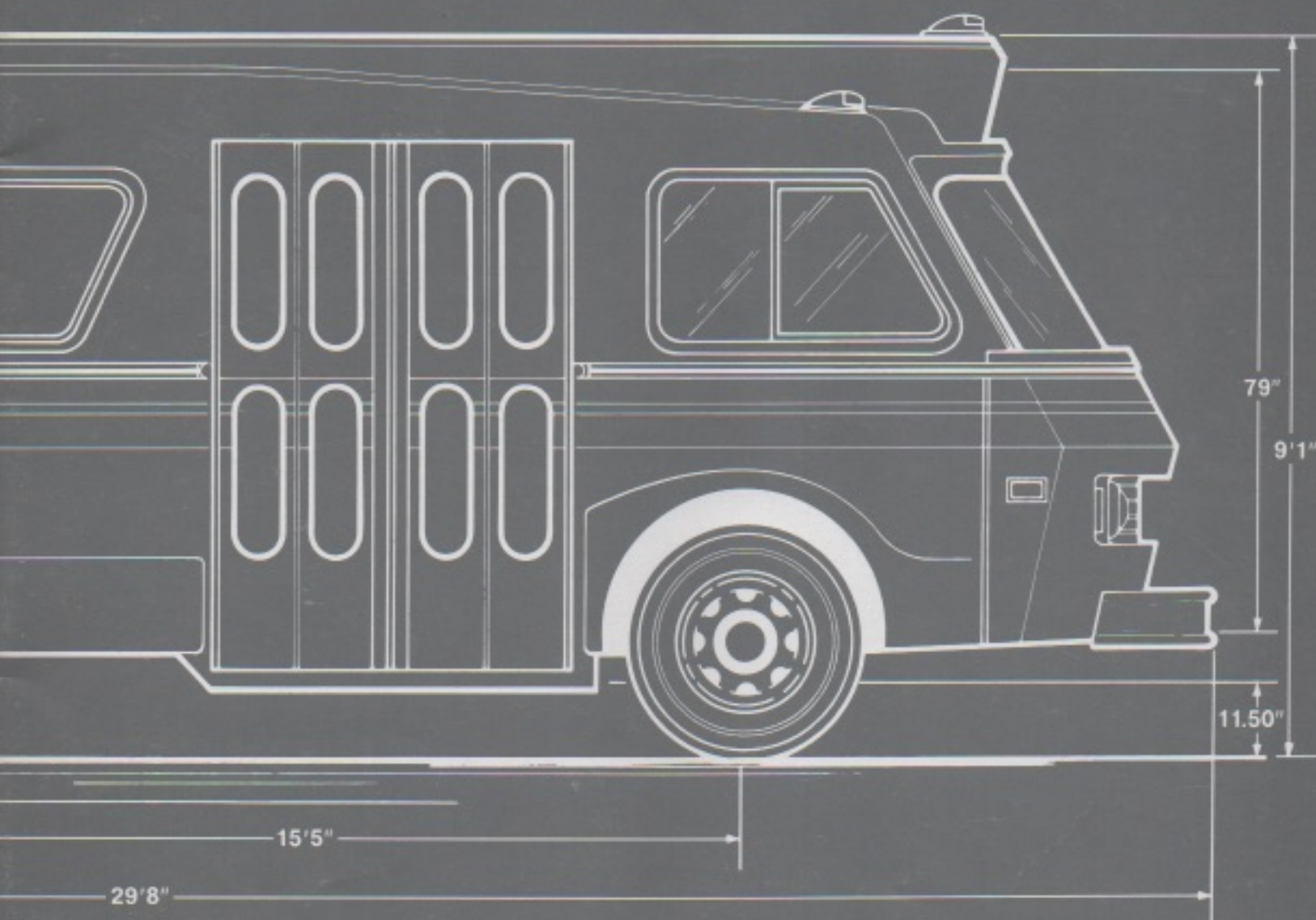


Transit Coach Specifications



Herein are technical data and specifications on the FMC 30-foot transit bus. In addition to information on the basic 26 and 28 passenger models, a special addendum on the elderly/handicapped transporter is included.

The FMC Transit Bus is a unique blend of skilled engineering, advanced design, and quality workmanship. Built by FMC Corporation, renowned manufacturer of sophisticated machinery for 89 years, the FMC Transit Bus represents a dynamic, positive answer to modern transportation needs, bringing new levels of quality, maintainability, and passenger appeal to the 30-foot bus.

Various configurations of the transit bus represent an adaptability to a myriad of urban and suburban transportation systems. Innovative structural and engineering designs provide improved passenger comfort and drivability.

A unique adaptation of the FMC Transit Bus is the special unit manufactured for elderly and handicapped passengers. A special section at the rear of this brochure describes this vehicle.

FMC Transit Buses are manufactured to order at the Motor Coach Division, located in Santa Clara, California. Further information may be obtained by calling or writing:

FMC Motor Coach Division
Marketing Department
333 Brokaw Road, Box 664
Santa Clara, CA 95052
(408) 289-2789

Transit Coach Specifications



REGULATORY REQUIREMENTS

FMVSS No. 101

Control Location, Identification and Illumination (Ref. Automobile Standard)

FMVSS No. 102

Transmission Shift Lever Sequence, Starter Interlock, and Transmission Braking Effect

FMVSS No. 103

Windshield Defrosting and Defogging System

FMVSS No. 104

Windshield Wiping and Washing Systems

FMVSS No. 105

Hydraulic Brake System

FMVSS No. 107

Reflecting Surfaces

FMVSS No. 108

Lamps, Reflective Devices, and Associated Equipment

FMVSS No. 112

Headlamp Concealment Devices

FMVSS No. 113

Hood Latch Systems

FMVSS No. 116

Motor Vehicle Brake Fluids

FMVSS No. 121

Air Brake System

FMVSS No. 205

Glazing Materials

FMVSS No. 207

Seating Systems

FMVSS No. 208

Seat Belt Installations and Occupant Crash Protection/Driver's Seat

FMVSS No. 209

Seat Belt Assemblies

FMVSS No. 210

Seat Belt Assembly Anchorages

FMVSS No. 217

Bus Window Retention and Release

FMVSS No. 302

Flammability of Interior Materials

General Dimensions

Length, Over

Bumpers 356 In.

Wheelbase

185 In.

Width, Exterior

96 In.

Height, Exterior

102 In.

Height, Floor

(At GVW) 18.5 In.

Height, Step to

Ground 11½ In.

Headroom, Aisle

74-78 In.

Width, Interior

90 In.

Width, Aisle

20 In.

Seating

With Rear Door 26 Passengers

Without Rear Door 28 Passengers

Tread

Front 81 In.

Rear 72 In.

Turning Radius,

Wall-To-Wall 33 Ft.

Approach Angle

14°

Departure Angle

11°

Ramp Breakover

10°

Curb Weight (CW) ⁽¹⁾

Gasoline 12,000 lbs. Diesel 13,000 lbs.

Gross Vehicle Weight ⁽²⁾

Rating (GVWR)

Gasoline Diesel

26 passenger 16,100 lbs. 17,100 lbs.

28 passenger 16,400 lbs. 17,400 lbs.

(1) Full Fuel, Oil, Coolant, No Driver or Passengers

(2) CurbWeight Plus Driver and Seated Passengers at 150 lb. Each

Engine

Gasoline (Standard):

Make and Model Chrysler

I-440-3

Type V-8

Bore x Stroke 4.32 x 3.75 In.

Displacement 440 Cubic In.

Compression Ratio 8.2:1

Fuel Low-Lead

Regular

Net Horsepower 247 HP @

4000 RPM

Net Torque 371 Lb.-Ft.

@ 2900 RPM

Forged crankshaft with tri-metal

bearings. Stellite faced exhaust

valves with positive valve rotators,

hardened valve seats. Solid state

electronic ignition. Cyclone-type

heavy duty air cleaner.

LPG/LNG

Chrysler 440 as above, modified for operation on liquified petroleum gas (propane) or liquified natural gas. IMPCO carburetion system with all required safety devices.

Net Horsepower (Propane)

209 HP @ 4000 RPM

Net Torque (Propane)

313 Lb.-Ft. @ 2900 RPM

Diesel (optional):

Make and Model Detroit Diesel

4-53C50

Type

In-Line 4 Cylinder, 2 Cycle

Bore x Stroke

3.87 x 4.50 In.

Displacement

212 Cubic In.

Compression

Ratio

21:1

Fuel

Diesel

Net Horsepower

130 HP @ 2800 RPM

Net Torque

270 Lb.-Ft. @ 1800 RPM

Induction hardened crankshaft, hardened valve seats. Cam operated C-50 injectors. Cyclone-type heavy duty air cleaner.

Mounting:

All engines are installed in the rear of the bus and are shock mounted to isolate vibrations. A firewall of sandwich construction separates the engine and passenger compartments, providing both thermal and acoustic insulation.

Insulating foam is sandwiched between a sheet of .060 thick aluminum on the engine compartment side and plywood on the inside of the coach.

Access to the engine is provided by doors on three sides of the compartment. The engine/transmission assembly is cradle mounted for easy removal for major service.



Emissions:

Chrysler (Gasoline) — This engine is certified by the Environmental Protection Agency for heavy duty vehicles in conformance with Section 206 of the Federal Clean Air Act (42 USC 1857f-5) and 40 CFR Part 85. For use in California, the engine and fuel tank are equipped with a fuel evaporative emission control system. The engine and control system are approved by the California Air Resources Board (Executive Orders A-79-1 and A-79-2). Emissions of the 1974 engine are:

HC + NO _x	15 GM/BHP-HR
CO	23 GM/BHP-HR

Chrysler (Propane) — When equipped with the IMPCO carburetion system, this engine meets the Federal and California requirements.

Detroit Diesel — The 4-53 engine meets both Federal and California emission requirements for 1974.

Emissions are:

HC + NO _x	13 GM/BHP-HR
CO	10 GM/BHP-HR

Exhaust Opacity (Smoke) —

Acceleration 5.5%

Exhaust Opacity (Smoke) —

Lug Down 7.8%

This engine has Federal, but not California certification for 1975. Modified engines are being developed to meet the anticipated 1976

Federal requirements. These engines are expected to meet the California requirements for 1976 and 1977.

Operating Range:

The Coach has the following minimum operating range on a typical city bus duty cycle:

Gasoline	375 Miles
Propane	230 Miles
Diesel	375 Miles

Performance At GVWR:

Chrysler (Gasoline) — A top speed of 53 to 83 MPH is obtainable depending on differential ratio and assuming a 4000 RPM engine limit. The bus will maintain 64 MPH on a 3% grade, 51 MPH on a 6% grade at GVWR with the 4.63:1 ratio.

Detroit Diesel — As geared for optimum performance in city service, the bus has a top speed (Governed) of 56 MPH on 1.8% grade and on level ground. It will maintain 42 MPH on a 3% grade, 30 MPH on a 6% grade.

Transmission

The transmission is an Allison AT-540 which was specifically designed for "Stop and Go" operation in vehicles such as city delivery trucks and buses. Upshifting and downshifting are automatic within each drive range. Vacuum shift modulation is used with the gasoline and propane engines, mechanical modulation is used with the diesel. A single-stage three-element torque converter with a 2.0:1 stall torque ratio is used. Gear ratios are:

First	3.45:1
Second	2.25:1
Third	1.41:1
Fourth (Drive)	1.00:1
Reverse	5.02:1

Tires

8.25-17 tube-type, 10 ply, six tires per vehicle.



Wheels

Stamped steel ventilated disc type with split rims. Size 6.00S. Five (5) mounting studs on an 8.0 in. diameter bolt circle. Mud flaps are installed behind the rear duals; front mud flaps are available as an option.

Brakes

Service brakes are ventilated disc type with air boosted hydraulic actuation. These brakes are designed to provide exceptional heat dissipation, essential to long lining life. Lining changes require only the removal of the wheel and the brake caliper; wheel bearings are not disturbed or exposed during routine lining changes. A lining change should require approximately one fourth the time needed for a change of drum brake linings. The brakes are self adjusting.

The disc rotors are 13.07 in. diameter by 1.43 in. thick with radial ventilating passages. A 3.38 in. diameter piston is used in the caliper. All cast components are high strength nodular iron.

Separate circuits serve the front and rear brakes, providing "fail-safe" operation.

The emergency/parking brake is separate from the service brakes and consists of a drum brake mounted on the transmission output shaft. Actuation is by a lever mounted to the left of the driver.

This brake system meets State and Federal requirements for vehicles over 10,000 GVWR, for stopping distance, stability while braking, fade resistance, water recovery and warning devices.

Suspension

Independent suspension front and rear provides the low unsprung weight necessary for passenger car ride comfort without sacrificing vehicle stability. This suspension system has been developed and

refined in over two years of service in other FMC vehicles.

Front Suspension

A single transverse leaf spring connects the lower suspension arms. The leaf spring is 3.5 in. wide and 63 in. long with "Anti-Squeak" pads between the leaves. The upper suspension arms are attached to the frame in a manner facilitating camber and caster adjustment.

Front Suspension

All pivot points incorporate rubber bushings; no lubrication is required. Heavy duty double acting shock absorbers are attached to the frame and react on the lower suspension arms. Minimum ground clearance is 7.25 in. between the wheels. The front suspension has a 6,300 Lb. capacity.

Rear Suspension

Torsion bar springs act on the rear trailing arms. The bars are 32 in. long with a body diameter of 1.93 in. The trailing arms are fabricated from 4130 steel and are stress relieved after welding. Heavy duty double acting shock absorbers anchored to the frame react on the trailing arms. Minimum ground clearance is 6.88 in. between the wheels. The rear suspension has a 12,400 Lb. capacity.



Differential

A Rockwell Standard hypoid bevel differential is rubber mounted to the frame. Ratios of 4.63:1 (standard), 5.29:1, 5.83:1, 6.23:1 and 7.20:1 are available. The 4.63:1 ratio gives a speed of 56 MPH at 2800 engine RPM with the diesel. The other ratios may be used depending on the type of service required.

Steering

The steering gear is a Saginaw unit with a hydraulic control valve, power cylinder, and mechanical steering control. The steering wheel is 15 in. diameter with 4 turns Lock-to-Lock. The steering column is adjustable for optimum driver comfort.

With the bus stationary at GVWR on dry, level pavement with the engine idling, steering effort is only 3 Lb.-Ft. at the steering wheel. This effort remains approximately constant from just off straight ahead to approaching full lock.

Engine Cooling System

The cooling system, including heaters, has a 37 Qt. capacity. The radiator is mounted directly behind the engine with the shrouded fan blowing air out the rear of the bus through the 900 Square Inch core. A coolant recovery system is employed to prevent loss of coolant under extreme operating conditions. The cooling system is designed for high load operation at ambient temperatures up to 115° F. at sea level.

Passenger Heating System

Four separate heaters provide a total output of 123,000 BTU/Hour. The front unit (40,000 BTU/hour) provides heat for both the driver and forward passengers as well as defrost air for the windshield. This heater has priority over the rear units in the event the driver requires maximum defrosting.

The rear heater (40,000 BTU/Hr.) and two side heaters (21,500 BTU/Hr., each) are located for uniform heat distribution. A driver-controlled circulation pump assures maximum heating capability at all engine speeds.

Exhaust System

The muffler is located beside the engine with appropriate heat shielding. The tail pipe exits below the bumper left of center.

Drive Shaft

A short drive shaft with double universal joints and an axial slip joint connects the transmission output flange to the differential. In the event of failure, the driveshaft cannot strike the pavement.

Fuel System

A 75 gallon gasoline or diesel tank is mounted behind the rear wheels. Filler access is through a lockable door on the left side of the vehicle. A 60 gallon LP fuel tank is mounted in the engine compartment at the left rear corner of the vehicle.

Electrical System

The electrical system provides and distributes 12 VDC power to all electrical components on the coach. All circuits are provided with overload protection.

All wiring has adequate electrical insulation and provides flexibility and resistance against solvents or abrasions in accordance with SAE Standards J 557 and J 558. Wiring is correctly grouped and color-coded and is installed in such a way that system checks, maintenance and replacement can be effected with the minimum of effort. Wiring is adequately supported and where penetration of structural members occurs, grommets or similar devices are used to prevent chafing.

Where applicable, all circuits are suppressed with capacitors to eliminate interference with radio and TV transmission and reception.

A master electrical shut-off switch is located in the engine compartment.



Battery

One 12-volt, 205-ampere/hour battery is used. This capacity assures adequate electrical power under the most adverse conditions. The battery is located on the right-hand side of the vehicle, just forward of the engine compartment and is readily accessible.

Alternator

A Leece Neville 130-ampere, heavy-duty alternator is used. The rectifier is integral, eliminating external connections. The solid-state voltage regulator is integral with the alternator used with the diesel, separate with the gasoline engine alternator.

Instruments and Switches

The instrument panel is located directly in front of the driver and the auxiliary panels are in front and to his right and left. The main panel contains, in addition to the usual automotive switches and indicators, the door master switch, door release indicator, rear defroster switch and the driver's heating vents.

The auxiliary panels contain the AM/FM radio and tape deck (Optional), air conditioning and automotive controls, interior lighting master switches, passenger heat controls and master switch and heat vents for center forward portion of the coach.

An audible alarm is installed behind the main instrument panel to indicate when the door touch bar switches are closed and the door switch is in the lock position. The passenger signal chime is operated by a tapeswitch. Fuel gauge, oil pressure gauge, air pressure gauge, tachometer, battery and generator indicators are standard equipment. The door control switch is on the panel to the left of the driver.

Interior Lighting

The interior is illuminated by eleven, 2 bulb, incandescent fixtures. Each fixture emits 400 lumens, providing an effective lighting level at the seated passengers' reading plane and at the aisle floor. Fluorescent lighting is available. Fittings have smooth exterior appearance and are free of dust collection ledges and crevices. Though they are totally enclosed, the lens is easily removed for relamping.

The step wells are adequately lighted by individual lamps which are energized when the door controller is in the "Set-to-Open" position. The ground area adjacent to the door is also illuminated.

Exterior Lighting

On the front, integrated with the body design, there are 4 headlights, white, dual, sealed beam type, and 2—6" x 3" directional lights. On the rear, there are 2, 3 unit clusters, combining the stop lamp, back-up lamp, and turn signal lamp. On the side there are 2 amber side marker lights (near the rear). On the forward edge of the roof there are 5 amber identification lights, 1 at each corner and 3 clustered near the center. 5 Red identification lights spaced similarly to the amber lights are located at the rear edge of the roof. Side blinker lights are installed near the forward end of the coach, both sides.

Miscellaneous Electrical

Dual, 12 volt horns are situated beneath the front end of the coach. Passenger signal chime actuation is by a tapeswitch located above the windows on each side and running the length of the coach.

Body Structure

The basic vehicle was analyzed using the ICES-STRUDL-II structural analysis computer program developed at M.I.T. Local stresses were computed on the basis of local geometry, type of applied load and material properties.

This computer data shows that the Transit Coach structure will easily sustain the loads imposed upon it during normal revenue service. Using collision design criteria, the analysis indicates stress levels low enough to maintain structural integrity. In the case of roll-over crash, (dropping from 3 feet onto a flat, hard surface, roof impacted) calculations indicate maximum structural deflections will be in the range of 3 to 4 inches.



Chassis

The chassis is a steel weldment capable of supporting all loads imposed by the suspension, propulsion and braking systems.

The side sills are welded rectangular tubes capable of supporting passenger loads and providing a high-strength barrier against damage in the event of a side collision.

A $\frac{1}{8}$ " thick steel sheet is welded to the underside of the chassis members to form a sub-floor, which acts as a sheer panel and provides a smooth under surface. This design minimizes the number of crevices that could trap corrosive road salts. All joints are welded and have, where indicated by analysis, gussets and doublers to reduce stress concentrations.

The upper structure is a welded aluminum frame bonded to an outer skin of fiberglass and an inner skin of .040" aluminum sheet. This composite member is attached to the side sills of the chassis thus forming a highly efficient monocoque structure capable of carrying heavy loads with minimal deflection.

Body Panels

Roof and side panels are $\frac{1}{8}$ " minimum thickness fiberglass. The outer surface of the fiberglass has a layer of pigmented gel-coat, which provides a hard, lustrous, and corrosion-resistant, finished surface.

Inner side panels are .040" thick aluminum which are bonded and riveted to the aluminum frame and act as sheer panels distributing loads imposed by the suspension system and passengers.

Wheel Housings

$\frac{1}{8}$ " Thick high strength, low alloy steel with atmospheric corrosion resistance.

Access Panels

Engine compartment access panels are attached with piano-hinges and secured with latches. Panels are flush with the exterior surface and louvered to provide adequate ventilation.

Insulation

Roof and sides are insulated with spray-on urethane foam, $1\frac{1}{2}$ " thick, sandwiched between the inner and outer panels. The cavities formed by the plywood floor and the steel sub-floor and by the engine compartment firewall support members are filled with urea-formaldehyde foam insulation.

Because of the lack of nutrients, these insulating materials will not support insect infestation. Both materials are also highly resistant to the formation of fungus and are fire retardant.

Interior Lining

The ceiling panel is $\frac{1}{8}$ " fiberglass, with a gel-coated surface, pigmented to match the interior color scheme and providing a hard, vandal resistant surface.

The aluminum side panels are covered with easy to clean, wear-resistant, decorative plastic from the ceiling joint to a point below the windows. The rest of the panel is carpeted to provide a low-maintenance scuff-resistant surface.

Floor and Covering

$\frac{5}{8}$ ", 5 Ply, exterior grade plywood, secured to floor beams with sufficient fasteners to minimize deflection. Floor covering can be carpet, rubber or vinyl to suit customers' requirements.

Steps, entrance ways and exit areas are covered with ribbed rubber flooring, colored to match the interior color scheme.



Doors

The entrance door, located aft of the front wheels, is two leaf, opening inward, pneumatic open and close, controlled by the driver. Clear opening is $76\frac{1}{2}$ " high and 26" wide between door panels.

The rear door is two leaf, opening outward, pneumatic open and spring close, released by the driver. Clear opening is $76\frac{1}{2}$ " high and 26" between door panels. The rear door is located forward of the rear wheels to ensure minimum access distance to most seats, thus reducing dwell time. An optional touch-bar exit system is available.

Both doors are operated by an air pressure system and controlled by a five-way switch to the left of the driver and are designed to open or close in 1.5 to 2.0 seconds. Both doors can be equipped with sensitive edges.

To ensure passenger safety, a brake and accelerator interlock prevents movement of the coach when a door is in the open position. The interlocks can be overridden by operating a switch in the door engine compartment above the door. For added safety, both doors have windows in upper and lower portions of both leaves and 2" wide soft rubber seals on the meeting edges.

An emergency door-opening lever is located above the door. Its location, purpose and method of operation are indicated by an adjacent decal.

The one-door configuration is available as an option (see seating). This door opens outward to facilitate emergency exit.

Steps

Due to the low floor height only one step is required to board and leave the coach. Surface of the steps is ribbed rubber safety tread with yellow or white nosings. Steps are $11\frac{1}{2}$ " from the ground, with a 7" riser and depth of $18\frac{1}{2}$ ".

Stepwells are of high strength, low alloy steel with atmospheric corrosion resistance and capable of supporting a 600 lb. load distributed over the center portion with a deflection of less than $\frac{3}{32}$ ".

Windows

All glazing in the coach will meet the requirements of USA Standard Z26.1.

Passenger windows are tinted to reduce light transmittance and solar heat transmittance to 27%. Color of tint to suit customers' requirements.

Glazing in passenger windows is $\frac{3}{16}$ " thick laminated safety glass or rigid plastic.

Side windows are horizontally sliding sash with latching device to keep window in the closed position to prevent unauthorized entry when coach is unattended. Push-out type windows are available when required.

The rear window is a fixed sash, hinged, push-out emergency exit type, $\frac{3}{16}$ " thick safety glass.

Windshield glazing is installed such that external glare and reflections from the coach interior are held to a minimum. The windshield can be supplied with tinted band along upper edge if required. Glazing is $\frac{1}{4}$ " thick laminated safety float with neoprene glazing rubber with integral locking strip. Driver vision, from a point 30" behind the windshield on the standard line of sight, is as follows:

- Vertically, a minimum of 15° measured above standard line of sight.
- Horizontally, a minimum of 90° of the standard line of sight.
- Unimpaired by the windshield center divider which is only 1" wide.

Seating

Transit type seats have wall attachment and a single pedestal support to give good appearance and require minimum maintenance.

Seat spacing, shape, cushioning and color and texture of upholstery can be varied to provide the required degree of comfort, appearance, ease of maintenance and vandal resistance.

Seating capacity of the two-door configuration is 26 and of the one door is 28, both with a minimum seat spacing of 29 $\frac{1}{4}$ ". Aisle width is 20".



Stanchions

1 $\frac{1}{4}$ " Diameter stainless steel stanchions are located to assist passenger entry and exit. Handrail between stanchion and fare box and grab handles on seat backs supply support for passenger motion into and along the coach. Touch bars on rear door (if opted for) will assist alighting passengers.

The roof structure has been designed to support the loads from overhead grab rails, if these are required.

Mirrors

- 2 external, 8" x 8" rear-view
- 1 internal, 4" x 16" rear-view, drivers
- 1 internal, 5" upper right front corner
- 1 internal, 12" convex, rear stepwell

Bumpers

8" Deep x .13" thick corrosion resistant steel ribbed to provide anti-climb capability.

Windshield Wipers

Electric, two-speed, heavy duty, American Bosch, Model WWC. One mounted on each side with individual controls. 20" arm and 19" anti-wind lift blade. Electric windshield washers with one-half gallon reservoir located for easy filling.

Destination Sign

Located above windshield with electric drive. 6 x 49 mask opening. Mylar curtain, color optional. Sign is backlighted with fluorescent or incandescent lamps.

Modesty Panels

Modesty panels are located as required.

Advertising Card Racks (Interior)

Racks for standard advertising cards can be installed, with or without backlighting.

Paint

Exterior color scheme of coach to customers' requirements.

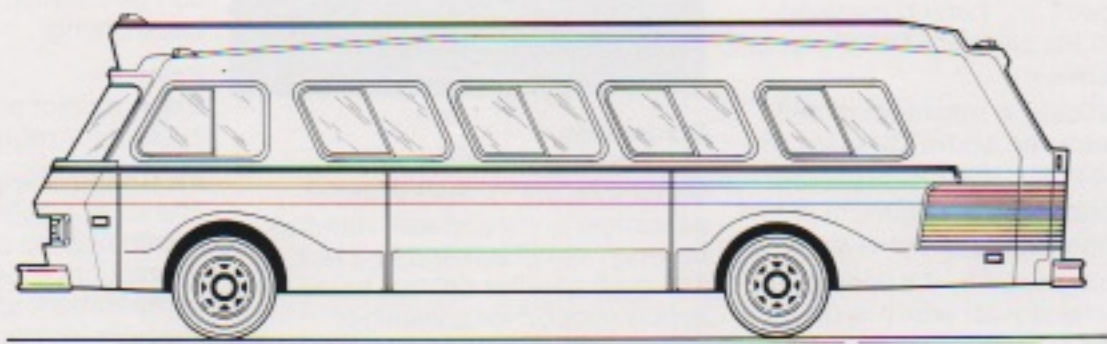
Air Conditioning

The air conditioning system has a nominal rating of 4 tons. It consists of one condensor in the engine compartment and three evaporator modules located in the coach, above the windows on the left side, and an evaporator located in the front under the dash board. The compressor is belt driven by the engine through an electric clutch.

This configuration ensures even distribution of cool air throughout the coach.

Refrigerant R-12 is used in the air conditioning system, permitting the use of standard hoses and simplifying installation.

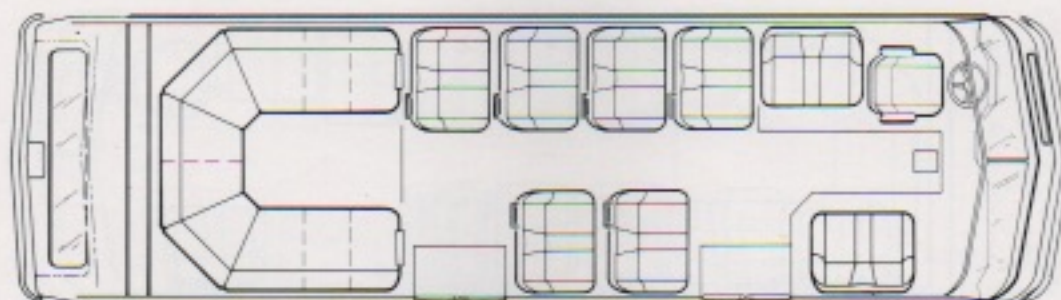
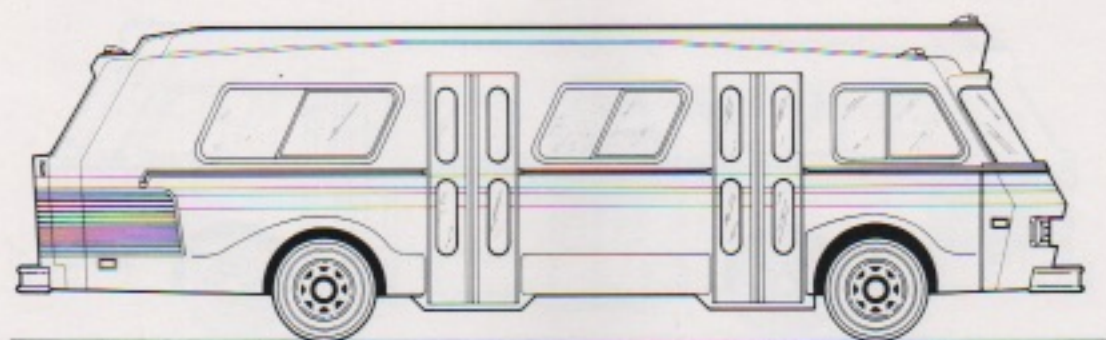
The FMC Transit Coach is available in a broad range of standard configurations to suit individual transit district needs. The following pages illustrate the versatility in seating, door, and window arrangements that are available.



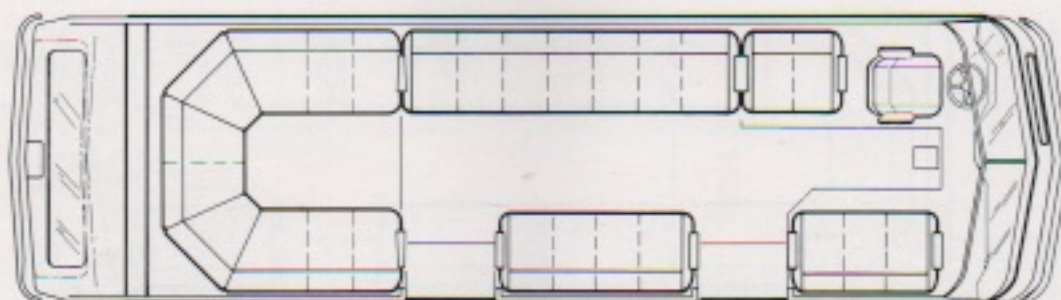
Typical Left Elevation

26

Passengers, Two Door



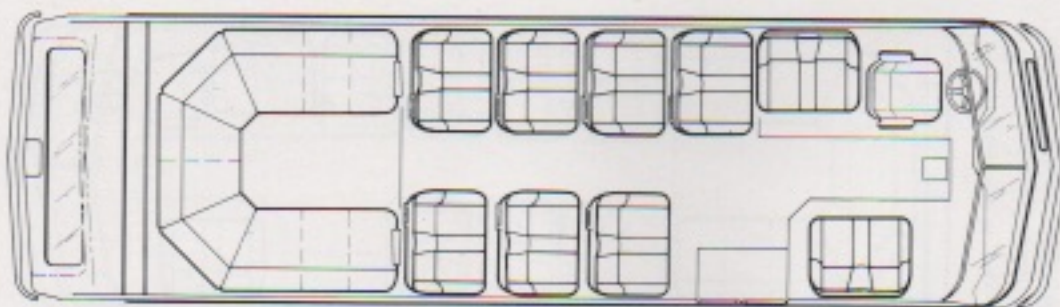
Transit Seating



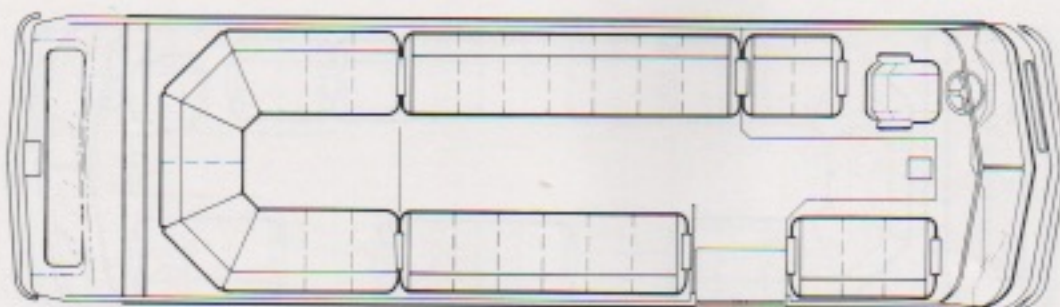
Perimeter Seating

28

Passengers, Single Forward Door



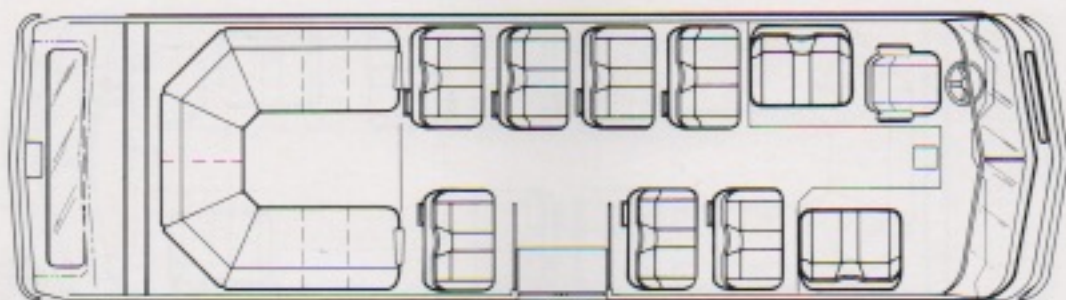
Transit Seating



Perimeter Seating

28

Passengers, Single Mid-Coach Door



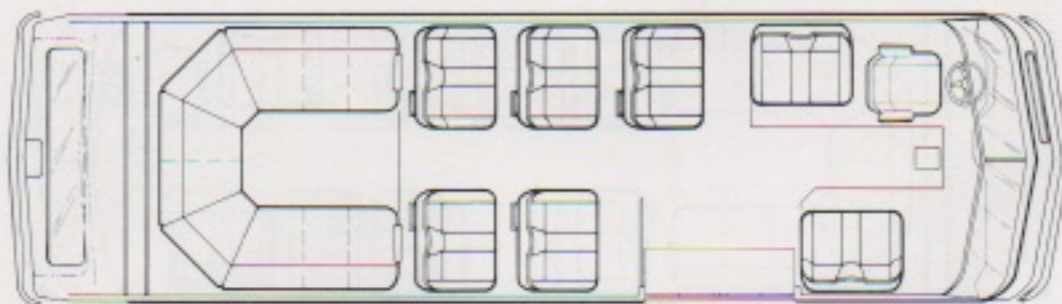
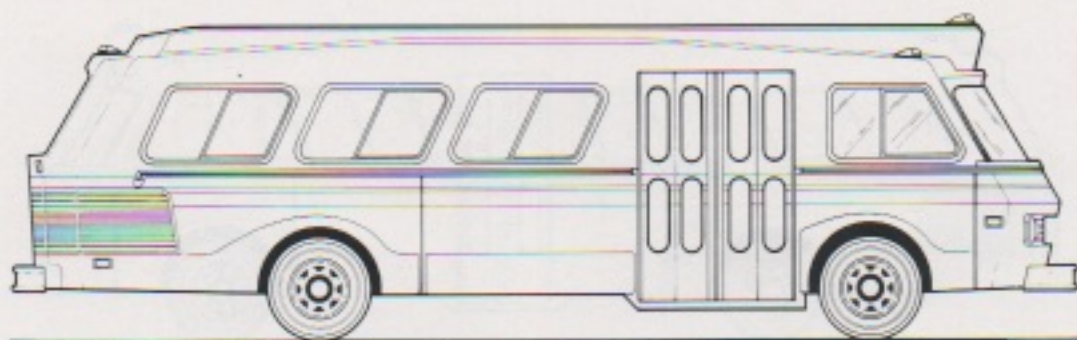
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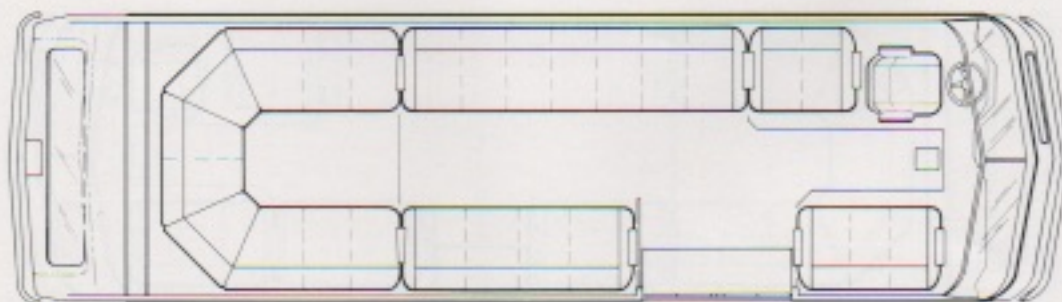
Perimeter Seating

24

Passengers, Double Width Forward Door



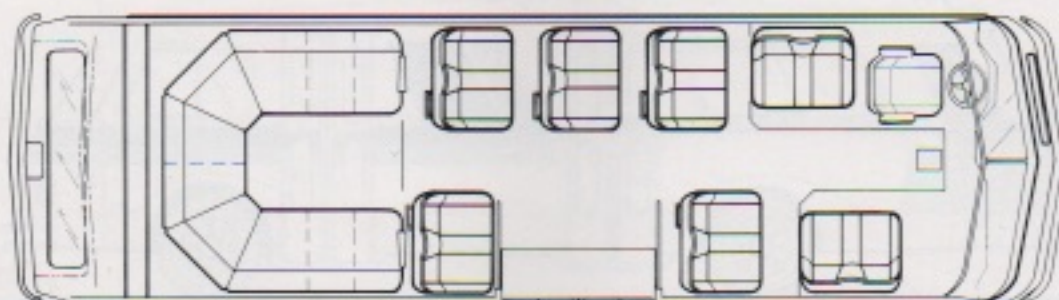
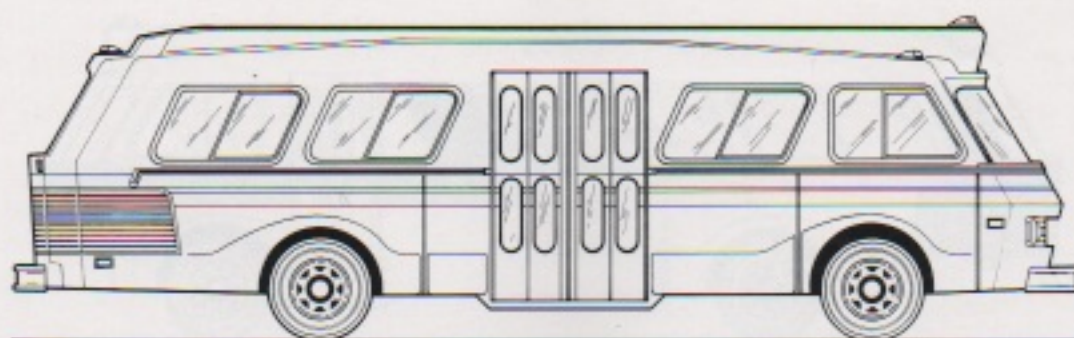
Transit Seating



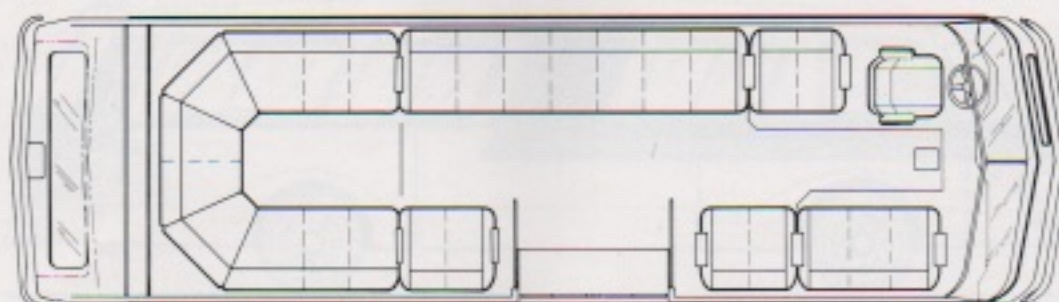
Perimeter Seating

24

Passengers, Double Width Mid-Coach Door



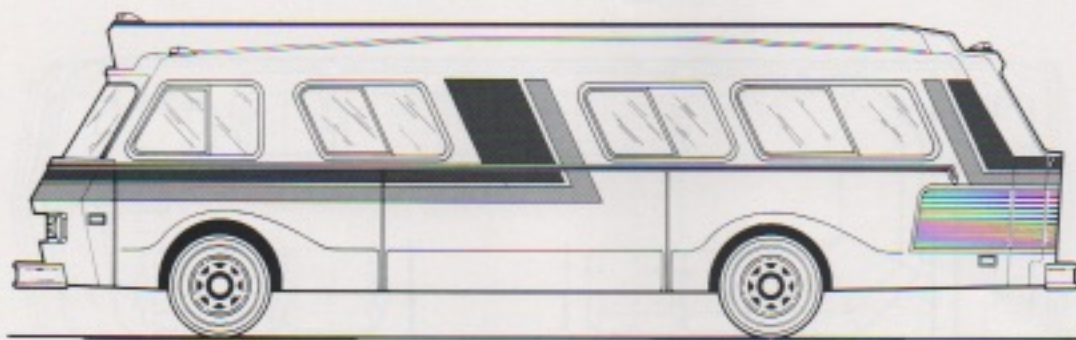
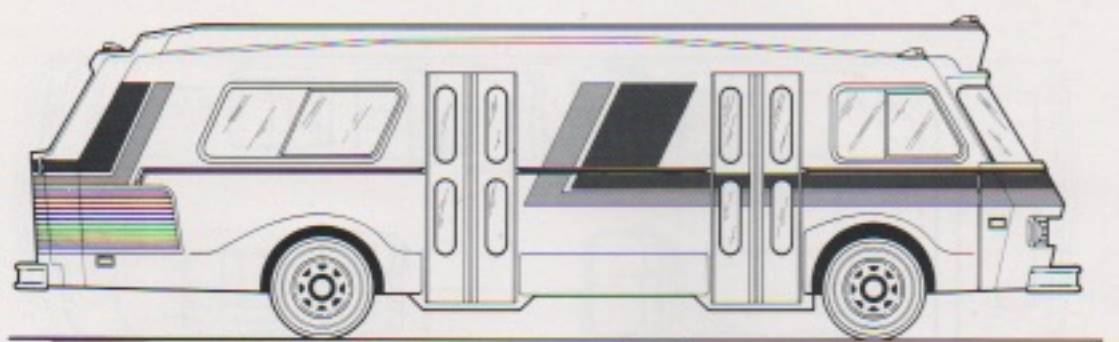
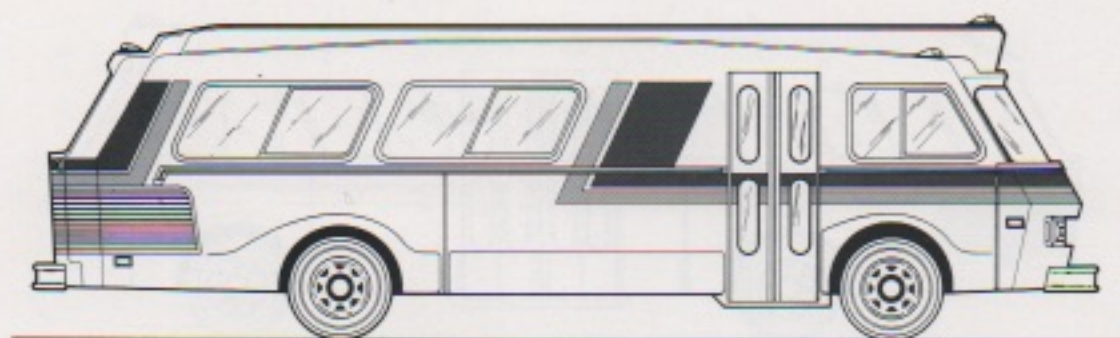
Transit Seating

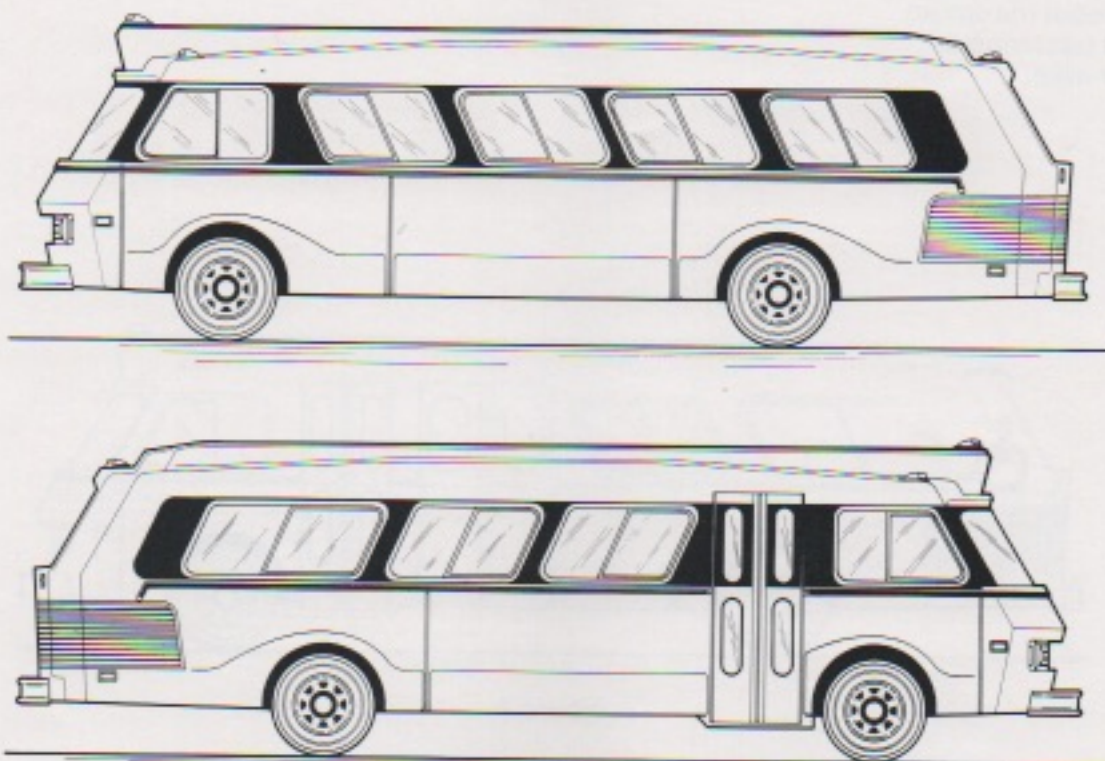


Perimeter Seating

Custom Exteriors

Graphic



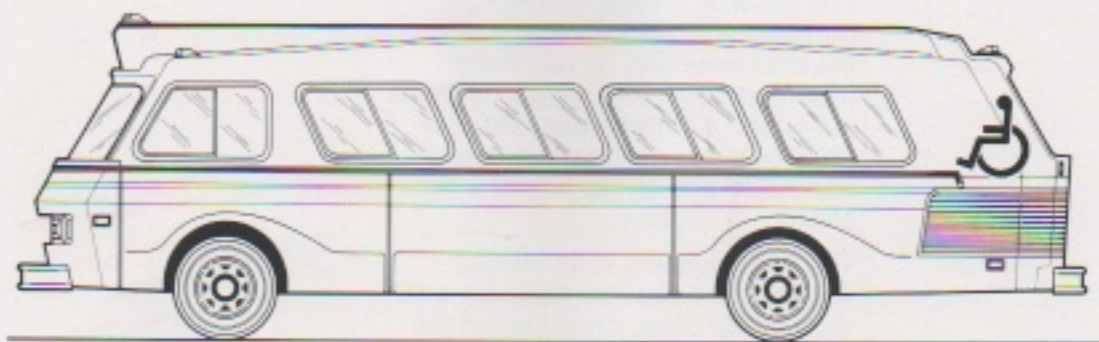
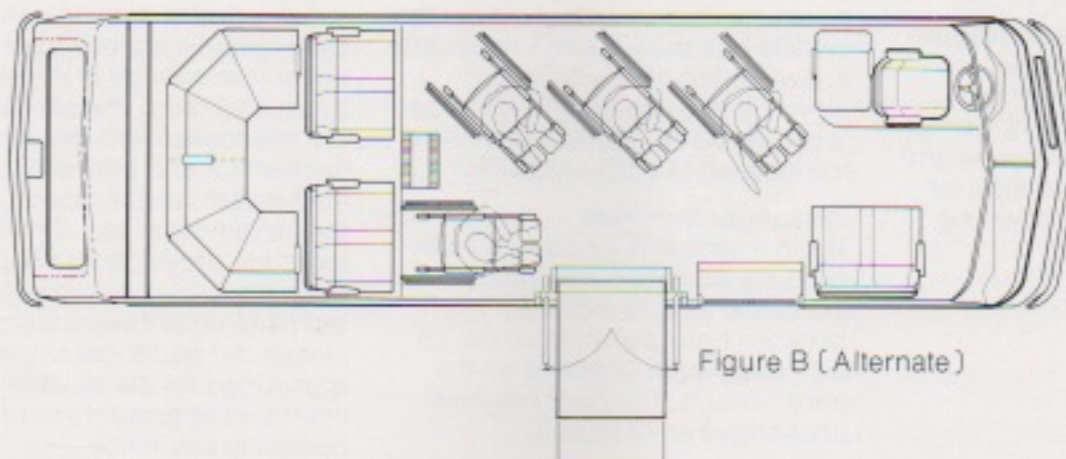
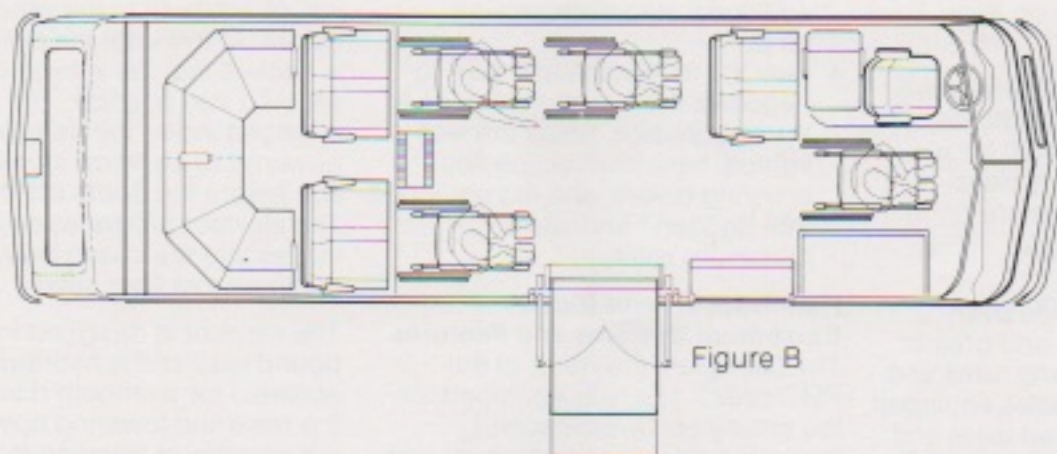
Black Line


Elderly and Handicapped Bus

FMC's basic transit vehicle has inherent features not found in current production buses which uniquely qualify it for transportation of the Elderly and Handicapped. These features facilitate the incorporation of systems designed to provide safe, comfortable and convenient transportation for these citizens. A group of handicapped consultants provided expertise in the human design characteristics of each system to insure maximum convenience for the passengers, attendant and driver alike.



Figure A



Typical Left Elevation

Basic Transit Coach

Detailed technical data for the basic FMC Transit Coach is contained in the FMC Transit Coach Specification. FMC's Transit Coach meets all the Federal Motor Vehicle Safety Standards listed on Page 4 of the Specifications.

A review of these specifications will reveal several standard features which are especially suited for a handicapped and elderly transporter. Of particular note are:

Four Wheel Independent Suspension

Provides a smoother ride over rough road conditions and greater transverse stability during turns and lane changes than vehicles equipped with air suspension, fixed axles and higher center of gravity.

Low Floor Height

The floor height of 18½ inches produces several key advantages:

1. The low floor requires approximately 12 inches less lift for elevator passengers (compared to standard bus 30" floor height) and therefore reduces time for embarking and disembarking passengers.

2. Elevator controls are easier to reach from ground level when the lift is in a down position.
3. The use of an electric step at the passenger door enables entry into the step well with one small additional step from ground level.
4. Two 3½ inch steps are used to negotiate the elevation change to the rear lounge. Steps are well lighted, have contrasting floor covering colors, and are equipped with padded handrails for maximum safety.

Handicapped and Elderly Equipment Systems and Features

The floor plan, Figure B, of the FMC coach specially equipped for the elderly and handicapped, illustrates seating arrangement and wheel chair placement. The passenger door is immediately behind the front wheels on the right side of the vehicle with the wheel chair elevator just rearward of this door. An elevation of the vehicle's right side is presented in Figure A illustrating the location of each entrance.

Passenger Entrance

The passenger door size on these specially equipped coaches is increased to a 28 inch opening between door panels from the 26 inch door width specified on the transit coach. The door height is unchanged at 76 inches.

Wheelchair Elevator

The elevator is recessed into the curbside wall of the coach and is covered externally by two flush mounted doors when closed to give the coach a smooth outward profile. Doors are attendant or driver controlled and swing outward for elevator operation.

The door opening is 41 inches wide and the elevator platform is 36" wide by 45" deep, providing ample support area for all wheelchairs. The outboard section of the elevator, approximately 18 inches long,

is hinged to provide adjustment on irregular terrain during loading and also serves as a ramp when backing the wheelchair onto the elevator. The wheelchair is restrained by the ramp in an upward attitude to insure a safe lift to the vehicle floor height. At this level the passenger is backed into the vehicle and secured into position. The platform is hinged inside the door line and is powered to a vertical stowed position before the doors are closed. The elevator protrudes only 12 inches into the coach interior to minimize lost floor space.

The elevator is designed for a 700 pound load and is hydraulically actuated for a smooth ride in both the raise and lowering operation. It is capable of traveling from the 18½ inch floor height to a point three inches below ground level to satisfy adverse loading conditions. Dual controls are provided for either driver operation or at the elevator by an attendant. The elevator doors are interlocked with the vehicle accelerator and brakes to prevent inadvertent vehicle motion when the elevator is in use. Similar interlocks are provided for the passenger door, so no vehicle movement can be made unless both doors are closed. An additional safety feature is provided for the elevator with interlocks to prevent improper operating sequence.

Seating Arrangement and Wheelchair Tie-Down Provisions

The vehicle configuration shown in Figure B can accommodate four (4) wheelchairs and eleven (11) ambulatory and/or elderly passengers. All wheelchairs are secured in a forward facing position for maximum safety and convenience. Ample space is provided along the left side of the vehicle to permit each passenger to be maneuvered in or out of the secure position without affecting the next passenger. The right side position is larger and can be utilized for special or standard-size wheelchairs. Other wheelchair arrangements can be provided if deemed more suitable by the user.

The seating for elderly and ambulatory passengers is designed around a "maximum of comfort and convenience" philosophy. The aft seating area has a "U" shaped lounge and two transversely mounted seats. Flip up arm rests are provided for passengers to permit easy entrance and exit from the seats.

Added seating and passenger mix flexibility is available through the option of additional bench seats in the mid-section of the vehicle. Seat mounting supports are built into

the vehicle frame structure to allow for installation of bench seats in exchange for one or more wheelchair positions.

The tiedown apparatus at each wheelchair position was custom designed to meet the specific needs of the FMC elderly and handicapped vehicle. The device affords passengers expedient maneuverability into or out of each space and requires a minimal effort to secure or release the wheelchair from a fixed position; passengers desiring to be self-sufficient are able to operate the device without assistance. The apparatus is easily removeable should the need for more elderly and ambulatory passenger seating occur. Use of other makes of tiedown devices is possible should the customer so desire; specific arrangements will be made at the time of order.

Other Safety Features

In addition to the safety features associated with the vehicle characteristics described in earlier sections of this document, the below mentioned items serve to further enhance the safety of elderly, ambulatory and handicapped passengers.

Handrails

Padded handrails are provided at all strategic locations to assist ambulatory passengers in entry, exit and seating movements. This includes handrails at doors, elevator platform, steps, and changes in floor elevation.

Non-Skid Step and Floor Surfaces

The vehicle is equipped with a ribbed-rubber tread in the step well. Changes in floor height are clearly marked with bright colored edges for identification and safety. The seating area is covered with indoor-outdoor type carpeting which will eliminate slip hazards during inclement weather.

Provisions for the Deaf and Blind

Special provisions for deaf and blind passengers such as lighted or bright colored markers and audible tone systems will be reviewed personally with each customer and specially defined in accordance with their requirements.

Lighted Entrances

In addition to step edges being brightly colored marked for safety, step and platform areas are illuminated with spot lights for night time operation.

Vehicle Exterior Colors

Bright vehicle colors are available to assist in vehicle identification for those with sight impairment.

Provisions for Installation of Radio Equipment

Vehicles can be supplied with a citizens band radio antenna and pre-wired for radio hook-up. Speakers can be installed throughout the vehicle for stereo music and/or disembarkation announcements.



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